

Mojo Plugs



For Growing Mushrooms on Logs and Stumps

Growing gourmet and medicinal mushrooms with plug spawn is an easy way to convert logs and stumps into fresh mushrooms. It brings the joy of growing and harvesting your own mushrooms at home. The average 4 to 6 inch diameter log will take 9 to 12 months to produce the first fruiting. They will support multiple fruitings (harvests) of fresh mushrooms for up to 3 to 5 years. *These plugs must be used within 2 weeks of receiving them. If you cannot use within 2 weeks, you can place it in the refrigerator (not freezer) to keep dormant for up to 6 months before it must be used.*

Grow Kit Includes: Wooden Dowels, Mushroom Spawn

Equipment You Will Need (Not Included):

- Rubber Mallet
- High Speed Drill
- 5/16" Drill Bit
- Beeswax or a Cheese Wax
- Hotplate, Small Stove, or Alternative Method to Melt the Wax
- Old Can for Melting Wax
- Small Brush for Wax

Step 1: Log Selection



Mushrooms can be grown on a variety of logs and stumps. You want to select a log or stump from a recently cut (no older than 1 month), healthy hardwood tree. The best wood types are hardwoods such as oak, maple, poplar, birch, and beech. Types of wood to avoid are any softwood, such as conifer, and any redwood, such as cedar. The best size of log is 4 to 6 inches in diameter and 2 to 4 feet long. You can inoculate larger diameters but it can take longer to produce fruit and is much harder to move the log around. You want logs that are free of any bark damage or have any type of interior rot. Lichen and moss on the bark is okay. The best time of year for logs to be cut is from late fall to early spring. Trees can be used otherwise, it is just ideal to cut when dormant. You can store logs for up to 6 months if kept elevated off the ground and not allowed to dry out (soak once per month). The best time of year to inoculate a log is when the weather is more mild. If done in early fall, make sure there is 1 to 2 months growing time before the first frost. Spring time is a great time to inoculate logs. If you have a protected area to store the logs, you can inoculate any time of year.

Step 2: Drilling Holes



Take your high speed drill with a 5/16" drill bit, and drill 1 1/4" holes 3 to 4 inches apart across the entire log. You should off-set each row so that the holes do not line up. Depending on the long size, you should use 40 to 50 plugs per log. While drilling the holes, it is also a good time to melt your wax. Place your old can on your chosen heat source and heat until just melted, if wax smokes, remove from heat and turn temperature down. You will need 1/8th to 1/4 pound melted wax per 100 plugs.

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Step 3: Insert Plugs



Insert one plug per drilled hole. You may need the rubber mallet to insert the plug all the way. You want to plug to be $\frac{1}{4}$ inch below the surface of the bark. You can use a smaller tool to push the plugs slightly below the bark. *Note: Only use ONE type of mushroom per log!*

Step 4: Wax



After checking to ensure all holes are filled with plugs and the wax is melted. Now take your small brush and carefully cover each hole with wax. Do not cover the entire log in wax, just the drilled holes and each end as well as any areas the bark is damaged and has exposed the wood. If you have extra drill holes with no plugs, fill them with wax.

Step 5: Incubation



This is the most important step and the one most people fail on! Your logs need to be stored without direct competition, or logs touching the soil directly. They also need to be stored in an area where you can water them every other week for 10 minutes if you live in a moist climate. If you live in a dry climate, the logs may need watered up to 2 times per week. Do not water logs once temperatures freeze or if logs get rained on. The time to fruiting can vary greatly depending on diameter of log. An average 3 to 4 inch diameter log will take 9 to 12 months to reach the fruiting stage. It is very important to make sure your log does not dry out during this entire period. If in a dry climate, you can also bury the log in a gardening container full of sand. This can help retain moisture in the log.

Step 6: Fruiting



Once your logs have incubated and fully colonized, it is time to initiate fruiting. Each type of mushroom has a unique temperature range for fruiting. Check for mushrooms very closely once the outside temps reach the preferred range. If your log is fully colonized and not fruiting, you can soak the log for no more than 24 hours. If it has been rainy or you are in a wet area, you may not need to soak! After soaking your log, it should receive a watering 1 to 2 times per day if it is not raining or excessively humid to initiate fruiting. Mushrooms should form within 2 weeks of soaking if the temperatures are right. Your log will continue to fruit when given proper humidity and temperature for the next several years.